# e:Medium Flash NEWSLETTER

## March 2025

Dear Reader,



Welcome to the latest edition of our newly formatted monthly newsletter! Stay up to date with the most exciting re-search findings from the e:Med network. Our goal is to foster collaboration, communication, and knowledge ex-change within the community. Please feel free to draw our attention to your new publications via e:Med website.

Enjoy reading!



### WHAT DOES THE CLOCK SHOW? Body's rhythm under molecular inspection

Researchers of the DeepLTNBC alliance, under the supervision of Dr. Adrián Granada, identified four circadian clock subtypes among 14 breast cancer cell lines, revealing how these influence drug response. In a related study published, the same team showed that both circadian rhythms and drug properties independently shape time-of-day drug sensitivity in human cells. Together, these studies lay the groundwork for circadian-based cancer therapies that could optimize treatment timing, enhance efficacy, and reduce side effects. read more **here** and **here** 





### COCAINE USE TRANSFORMS THE BRAIN Broad molecular changes revealed by multi-omics analysis

How does cocaine use disorder (CUD) shape the molecular landscape of the brain? Researchers of the SysMedSUDs alliance under the supervision of Dr. Stephanie Witt, Dr. Lea Zillich and Prof. Rainer Spanagel, Central Institute of Mental Health Mannheim, provided a comprehensive multi-omics analysis of the brain, revealing widespread metabolic and signaling disruptions in the ventral striatum. The findings on metabolic and glutamatergic signaling changes may pave the way for targeted interventions of CUD. **read more** 





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### WANTING MORE Motivation behind drinking alcohol

What makes a person come back for more alcohol while others can resist? Researchers of the demonstrator Target-OXY under the supervision of Prof. Dr. Christine Winter, Charité-Universitätsmedizin Berlin, investigated the link between drinking behavior and motivation. They found striking sex differences in the animal models of alcohol relapse. While female rats drink more and exhibit stronger cue-driven behavior than males, males show more goal tracking behaviour. These findings highlight the complex biology behind alcohol consumption as well a the need for sex-specific preclinical addiction research. **read more** 

### ONLINE SEMINAR SERIES Modelling approaches for disease processes

April 2, 2025 Modeling the deregulation of alternative splicing in disease

Prof. Dr. Stefan Legewie, University of Stuttgart

Location: Zoom, 2 p.m. CEST







### EXCESS IRON IN WOMEN Higher ferritin levels play a role in women with PAD

Excess iron is suspected to be a risk factor for atherosclerosis, but the existing data is controversial. Scientists of the NephrESA demonstrator with Prof. Dr. Martina Muckenthaler, Heidelberg University Hospital, explored the link between iron biomarkers and Peripheral Artery Disease (PAD) in two large cohorts with two different analytical methods. They found sex-specific associations between iron status, especially ferritin levels, and PAD, but no associations for hemochromatosis genotypes. Their research underscores the potential role of iron status in females with PAD.



### **ONLINE SEMINAR SERIES** Modelling approaches for disease processes

May 7, 2025 Bayesian metamodeling of complex biomolecular processes in living cells Dr. Barak Raveh, The Hebrew University of Jerusalem, Israel

Location: Zoom, 2 p.m. CEST read more

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